

Vol. 2

No. 1

THE TIGER.



SEPTEMBER, 1904

A PROPER EDUCATION

in the making, fitting and wearing of men's headwear
is as important as education in many other lines—

Charles A.
Collins

The HATTER at 1018 Market Street, opposite Fifth,
has just such knowledge—his stock is most complete of
up-to-time styles—material and finish the best obtainable
consistent with prices : : : : : : : : : :

P. A. McDONALD

Wholesale and Retail Dealer in

COKE AND COAL

519 MISSION STREET

Room 510

Telephone Main 224

Yards { HOWARD AND BEALE
 { SPEAR AND FOLSOM

SAN FRANCISCO

H. S. Crocker Company ²¹⁵⁻²¹⁹ BUSH STREET
San Francisco, Cal.

DRAWING MATERIALS

STATIONERY, PRINTING, COPPER PLATE ENGRAVING

MRS. M. DETTLING, NO. 384 UTAH STREET, - - - AGENT



Table of Contents

	PAGE
A Thunder Storm in Yosemite.....	2
"Soft Water" for Industrial Purposes.....	3
Mr. Kalmus on School Spirit.....	4
Clinton's Ghost.....	5
Lil.....	7
Locomotive Repair.....	8
Three Men in a Boat.....	9
True Sentiment.....	10
The Rise in Fame of "Plough-Horse" Gregg.....	11
In the Fields of Elysium.....	12
Editorials.....	15
Harry Deane's Bribery.....	16
School Notes.....	18
Exchanges.....	20
The Attack on the Tower.....	21
Dead Leaves.....	22
Shop Notes.....	23
The Cowboy's Unmailed Letter.....	25
From an Island.....	26
Athletics.....	27
A Cold Reality.....	28
Jokes.....	29
Poor Freshie.....	31
Training of Co-eds.....	32

A Thunder Storm in Yosemite

A cloud appears upon "Cloud's Rest,"
A flash of light comes from the West;
And now the sun, the clouds amid,
Sinks from our sight, in Cloudland hid;
The lightning-driven storm advancing
Each moment seems to be enhancing!
While the roar and crash of thunder
Seems to rend the very air asunder!
And zigzag, wavering to and fro
The forked lightning flashes glow!
Large drops of rain begin to beat,
And quickly thicken into sleet;
And now the snow seems to prevail,
But soon gives place to sheets of hail.
And for a time the storm raves on—
But now it passes and is gone;
Faint rumblings from the distant roar
Grow fainter and are heard no more;
And not a sound disturbs the ear,
The thunder storm no more we hear,
No matter, listen as we will;
The air is tranquil, calm and still,
The clouds above are scurrying past,
And now the sun is seen at last,
While gorgeous tints the sunset follow,
Insure fair weather for the morrow.
But soon the swiftly waning light
Proclaims the coming of the night,
And now, mid twilight dim and grey,
Toward camp, the tourist wends his way.

UREN, '07.

“Soft Water” for Industrial Purposes.

The subject of softening water for industrial purposes has received but little attention in years gone by, although methods for treating hard water were discovered half a century ago.

Manufacturing plants have usually been located with a view to the supply of labor, cheapness of fuel, and accessibility to markets; the quality of the water to be used being a secondary consideration. Of necessity railroads have located their watering stations where there was an abundance of water, without regard to its quality.

More recently, however, the keen competition of new industrial conditions and the necessity of reducing the cost of operation to the minimum, have led progressive managers to appreciate the immense saving that can be effected by having a soft water for use in boilers and for other purposes. When hard water is evaporated in a boiler the increasing impurities are deposited upon the inside of the boiler or on the boiler tubes in the form of scale.

One sixteenth of an inch of scale on the inside of a boiler necessitates the consumption of 12 per cent more fuel to generate the same amount of steam; 1-4 of an inch of scale requires 38 per cent more fuel; while three quarters of an inch of scale causes a loss of 90 per cent of fuel. The accumulation of this scale not only increases the cost of fuel, but by placing insulation between the boiler and the water allows the sheets and flues to become overheated, subjecting them to extremes of expansion and contraction. Then, too, it is frequently necessary to shut down the boiler to remove the scale.

The corrosive salts such as magnesium chloride in hard water, cause the structure of the boiler itself to corrode; thus shortening its life.

Softened water is water freed from salts of lime and magnesia, iron and alumina. It cannot deposit scale; it cannot corrode. This water

can be softened in unlimited quantities at a nominal cost by a water softening machine, or water softener which is an apparatus that removes these scale forming or corroding agents before the water goes into the boiler.

Sixty years ago the process of treating water with lime to remove carbonic acid and carbonates of lime and magnesia was invented by Dr. Clark, an English chemist. Shortly afterwards the process of removing sulphates of lime and magnesia by means of soda ash was invented by Dr. Porter. A combination of these two methods is called the Porter-Clark process, an excellent idea, as far as it goes. Next came the crude settling tanks; expensive to operate owing to the necessity for repumping the water, which doubles the cost of treatment; unsatisfactory in results because of the crudeness of the method and the lack of any device for varying the amount of materials in proportion to the quantity of water treated.

The Kennicott Water Softener, manufactured by the Kennicott Water Softener Co. of Chicago is a machine which automatically treats varying quantities of water with varying quantities of materials (always in the same proportion, in an automatic apparatus which purifies and softens the water at the lowest possible cost; thus filling a long felt want and meeting the requirements of up-to-date practice where continuous service is required. A chemical analysis of the water to be used in boilers is the first step towards its proper treatment to prevent scale formation, corrosion and foaming. Practically all impurities which cause water to be hard are subject to the action of chemical reagents; that is: other chemicals that will cause them to precipitate in insoluble condition so they can be removed.

The Kennicott system makes use chiefly of lime and soda ash as reagents for they are the

most efficient and the easiest to obtain in the open market; the cost of soda being about \$1.00 per hundred pounds and the price of lime is usually 50 cents per barrel of 200 pounds. The hard water is pumped to the top of the softener and as it flows into the machine it furnishes all the power the apparatus requires, both for mixing the chemical reagents properly with the water to be purified and elevating the chemicals to the top of the machine as well as working automatically all the mechanism of the apparatus. After the impurities in the hard water have been precipitated by the reagents they are automatically removed from the water as it passes through the apparatus and the purified water overflows from the top of the softener by gravity into the storage tank, without the necessity of repumping. The precipitation accumulates in the hopper bottom of the apparatus in the form of a thin paste, that readily flows when

emptied into a common sewer, or which is in some cases saved and utilized in the manufacture of white wash and boiler logging. The cost of operation varies somewhat but the general run of waters can be treated at an expense of from one to two cents per 1000 gallons, including cost of chemical reagents and labor. It is the purpose of this article to point out an effective and practical method of removing the impurities before the water goes into the boiler and not after the water goes into the boiler; thus taking care of the evil by flushing it into the sewer before it ever enters the boiler.

In these days of keen competition it is keeping down the cost of operation that produces the dividends and "Soft Water" is being considered by heads of industrial plants as being equally as important an item as the fuel bill.

J. C. MARTIN. JR., '01.



Mr. Kalmus on School Spirit.

The Senior class in Strength of Materials met immediately following the big Athletic rally of the 4th of August. Naturally the class was bubbling over with enthusiasm, and, observing this, Mr. Kalmus addressed us as follows:

"I am glad to see such a great amount of school patriotism among the student body. I came from a school with lots of spirit. Although we had a larger crowd, the enthusiasm in Kilograms per square *contimeter* was no greater than yours. The ratio of size cannot effect the amount of spirit. In other words, the ratio of our crowd to this crowd was not the ratio of our enthusiasm to yours, but inversely, the ratio of yours to ours. The tensile strength of any school spirit is greatly affected by certain com-

ponents of force, such as poor payment of athletic dues and bad attendance at games. In this school, do not allow these things to act as a shearing stress on your spirit nor even allow them to approach the elastic limit, much less the rupture point.

Consider the amount of your school patriotism to be infinity, and even then try to increase it. Although your student body may be small, athletics will advance as if it had a multiplex differential pulley attached to it, provided you have a maximum amount of school spirit. Take this problem: "If a boiler plate is rivited with a staggered joint—"

But this part does not interest us.

Clinton's Ghost

The day of the Templar parade a few business men met in the rooms of the California Camera Club, and soon the talk turned to reminiscences of their boyhood days.

One man told how, when he was out bathing in the surf, one of the men in the crowd, then about twenty-one years old, lost his false teeth. That set up a laugh on the fellow, and to retaliate, he told the following tale:

"When I was about seventeen years old, a crowd of us from the Pattern shop where I was working, decided to go duck hunting and surf fishing near Mussel Rock. We had no work to do on Monday, as that was Labor Day; so Sunday afternoon we all started for the Rock. We had decided to sleep that night in an abandoned hut near there, and in the morning we could probably get some fish and ducks.

Clinton was in the crowd with us; I guess you all remember him. He was the fellow who was always playing jokes. He was never satisfied unless he could do something that would set up a laugh on some one.

When we arrived, we found the old hut where we had decided to spend the night. It was pretty well gone in, half the roof being missing, and some one had stolen the window, leaving a large hole in the wall where the window had been.

It was getting cold; the fog and wind had begun to come in, and the damp made one's bones ache; so we made a fire in the fireplace at one end of the hut, in order that we might get warm before going to sleep.

After the fire was going well, we sat around it and told ghost stories, to see who would get scared the worst.

Suddenly Clinton, who had been unusually silent, spoke up and said, "Say, do any of you know why this place is deserted?"

Of course we didn't know, so he went on: "Well, an old Dago used to live here who caught

fish out at Mussel Rock. Something happened to him, I don't know what it was, but anyhow, he got mad and hung himself on that beam up there. See—there is some of the rope there yet."

We all looked at the further end of the hut, and there was a big beam with an old piece of rope on it. Some of us commenced to look uneasy.

"Yes," went on Clinton, "and they say that his ghost walks around at night—but of course I don't believe that."

There was a restless movement in the crowd, and Murphy here, suggested that we sleep outside, but we all laughed and asked him if he was scared. To tell the truth, I was kind of scared myself, but I wouldn't have acknowledged it.

After this disclosure of Clinton's, conversation lagged, and so we got ready to turn in. We all lay down around the fire, and in a few minutes were asleep.

After I had been asleep for a while, I woke up. The fire had died down, but it was still glowing. By the light it cast I saw Clinton get up and walk over to the beam where the Italian had hung himself. He took a fishline out of his pocket and threw it over the beam, then he took off his shirt and tied it to the end of the line. When he pulled the line, the shirt danced up and down as if it were alive. His idea was to lie down by the fire again, keeping hold of the line, and then wake up Murphy, who was dreadfully afraid of ghosts, and whisper, "Say, Murphy, there's the ghost," and then he would make the shirt dance around lively.

He quietly pulled the shirt up and down once or twice and it worked to perfection, but just as he lay down, the line caught on a sliver of the beam, and left the shirt suspended in mid-air. He crept cautiously back to free it, but in

doing so he made a slight noise—and Murphy woke up.

He saw the ghost, and let out a yell which sounded like a band of Comanchees on a scalping raid, and grabbing up my gun, he fired at the shirt.

Clinton didn't stop to explain matters, he just went through that open window "like he was burds." How the shot ever missed him, I don't know.

Of course all the fellows around the fire woke up, but they did not dare to move, because Murphy was about crazy and was ready to fire off the other barrel of the shot gun at any sound he heard.

Poor Clinton was outside without any shirt on and it was bitter cold, too. He kept a distance away from the hut at first, but finally he came up and called through a crack in the side of the hut, "Say, Murphy, it's only a joke. Don't you know me? I'm Clinton." But Murphy never answered a word, only kept pointing the gun at the shirt every time the wind moved it. That yell was the only sound we got out of him, although Clinton was begging and pleading all through the night to get him to put down the gun.

I tell you it was no fun to lie all night in one position on a hard floor, with a crazy man near you holding a loaded gun. Finally when it got light enough to distinguish objects, Murphy put down the gun. As soon as he did so, about three fellows grabbed him and the gun, but he was too weak to struggle. He tried to get up after

we had put the gun out of his reach, but he was so weak that he couldn't stand.

We called out to Clinton to come in and put on his clothes. A little later Murphy got up and staggered to the door. He was completely unnerved, and his one idea seemed to be to get as far away from the surroundings as possible. We begged him hard to stay, but not a word would he speak to us. He tottered down the ravine and rolled under the fence on to the road. When he reached the road his strength seemed to return, and the last we saw of him, he was hitting the high spots on the road for home. While we were watching him go down the road Clinton came out of the hut and said, "See the poor bugger go. You bet we'll never get him to go out with us again."

We joshed Clinton by asking him how he liked his fancy openworked shirt, and why he didn't take it with him when he went through the window, but he simply said, "Well, I didn't want that shirt, anyhow, I had an urgent call outside just then."

Clinton is in the army in the Philippine Islands now, chasing Niggers. I often wonder if he remembers the time he nearly got shot trying to manufacture a ghost.

The speaker turned around and said, "Say, Murphy, do you ever hear from Clinton these days?"

But Murphy was nowhere to be seen, for he had slipped away during the recital.

DONALD W. DAY.



Lil—The Story of an Army Mule

Why a mule should be named Lil, I could never understand, but every army wagon-train that I have ever seen or heard of had at least one Lil and one Buck. It seems natural for an army teamster to say, "You-u-u Buck!" or "Lil, you long-eared, bandy-legged, spavined, ring-boned, old — — !" A driver of mules rapidly acquires a vocabulary that is certainly forcible, but the elegance of which is doubtful.

Lil was one of a band of mules that was being sent to the Philippines with the army. The herd was crowded on the wharf waiting to be loaded on the big horse-transport. Lil evidently disapproved of the way that things were being managed, for she laid back her ears and looked wickedly at the herders that surrounded the band. An unfortunate baggage-man happened to pass with a trunk on a hand truck and came within striking distance of Lil. There was a sharp flash of iron-shod hoofs, a deep thud, and the trunk with one side smashed in landed in the waters of the bay. This was followed by a chorus of approval from the rest of the herd, and then the voice of an angry teamster loudly cursed the poor baggage-man for not keeping away from "that-'er mule's heels." This incident was the keynote to Lil's character. She was indeed a wicked mule.

After a great deal of confusion, increased by the swearing of the drivers and the braying of the mules, the herd was finally loaded and boxed up separately in the little narrow stalls on the ship. It is a serious problem to transport a large number of animals on a journey of more than a month's duration. Not a few of them died on the way, and strange to say, the principal cause of the casualties was sea-sickness. But finally the voyage was ended and Lil went to work as wheeler on a big four-horse, or rather four-mule, Doherty wagon.

One day a paymaster and his clerk with a large amount of money left headquarters to pay a command that was stationed at a small outpost. Lil was one of the team that pulled them. On the way out, she went lame. The driver was able to get another mule, so he fastened Lil's halter-rope to the bridle of one of the wheelers and let her trot alongside.

The trip back to the city was started just before dusk and it was dark when they reached a stretch of road bordered by heavy undergrowth.

There is one kind of Filipino that the soldiers have more difficulty in fighting than any other. It is the kind that in daylight and when the troops are near are "amigos," but at night or when the odds are with them, are "insurrectos."

The occupants of the wagon thought that they were perfectly safe from attack as all the insurgents had been driven out of that section of the country, so they were completely surprised when, with a sharp cry of command, they looked down into the muzzle of a half-dozen Mauser rifles!

The Filipinos were standing in a bunch about eight feet from the seat of the wagon and near where Lil was tied. It was then that the mule showed her good sense. Swinging around, she drove her huge hoofs right into the center of the bunch of robbers. Three quick hard kicks were sufficient to lay them on the ground, two of them completely knocked out. When they recovered from this sudden attack, they were covered by the pistols of the three soldiers, and it was six very crest-fallen insurgents who went before the military Judge-Advocate the next day.

It is needless to say that Congress voted no medal for heroic conduct for Lil, but a certain teamster gave a certain long-eared mule an extra measure of oats.

Locomotive Repair

One of the greatest items of expense in the maintenance of a railway is necessitated by the care and time required in keeping the locomotives in proper running order. This giant horse, which bears at all times a certain amount of rack and tear, and at other times considerable abuse, is subject to ailments and diseases peculiar to itself.

An engine (a locomotive is universally spoken of as "an engine" although it is really composed of two engines, one on either side) rarely returns from a trip but what there is something on it to be repaired or replaced, a lost or broken bolt, a set of guides to "line up" a renewal of valve-stem or piston packing, or driving-box wedges to tighten; perhaps, rod brasses to be reduced, and very often there is a "hot box" to contend with. These are a few of the more common troubles which are dealt with by the machinist.

The boiler-maker, carpenter and tin-smith each come in for their share of work. The boiler-maker must attend to the broken stay-bolt in the fire box, or the leaking flue or joint in the boiler. Under his care is also the washing of the boiler which act must be performed after each trip. The carpenter may have a running board or cab to mend, or he may have to put on a new pilot, or "cow-catcher" as it is commonly called, in place of one that has been "up against it." "It" stands for anything that gets in the way. We seldom see a locomotive collide with a horse or cow or a passing wagon, but it is not at all an uncommon occurrence when out on the road. The tin-smith attends to all the defective pipework, and to the tin work as his name signifies. All of the above mentioned go under the head of "running repairs" and are attended to by a force of men known in the shop as "round-house men" whose duty it is to keep the engines in running order. So much for the light repairs.

You may ask: "Can an engine run thus indefinitely with a few hours' attention at the end of each trip?" By no means. On an average of about every fifteen months it must be sent to the back-shop and go through a complete systematic course of repair. Generally about three weeks are required to turn out again, well and new the machine that entered the railroad's hospital weak and worn out with over a year's drudgery.

Here, let us say, is an engine that is booked for the back-shop. We'll follow it through its various stages of recovery. Don't be frightened! We shall not spend the allotted number of weeks on the subject, but we'll run hastily through the way in which it is overhauled.

The tank, or tender, is first disconnected, then the engine is "stripped." The rods, valve gear, steam chests, pilot, ash pan, spring rigging, and all the pipe work is removed; the cab is raised by means of large rope tackles, and the jacket and lagging are taken off; all the smaller parts are removed, 'til finally, practically nothing remains on the wheels but the frame and boiler.

The wheels are removed in two ways. The more modern and more convenient way is by the use of the "drop-pit" which is a device composed of a large movable table or platform resting on wheels which allow it to move at right angles to the track. This table is generally about eight feet long and when in place is part of the track itself. It is raised or lowered by the use of air or hydraulic pressure and moved sideways by means of large ratchet levers. The engine, the wheels of which are to be removed, is pushed over the drop while the table is in place and the pair of wheels to be taken out is allowed to rest upon the table. Then the engine is held steady with jacks and the table is lowered, taking with it the pair of wheels. It is then moved sidewise, raised again and the wheels are rolled off on another track. The

table is then replaced and the other wheels are removed in the same way.

The other way in which the wheels may be taken out is by the use of hydraulic jacks. Four jacks are used, one on either side of each end of the engine. When they are in place the engine is carefully raised clear of the wheels which are rolled out and the engine is lowered on large timbers which are set across the track.

We shall consider our engine in need of a fire-box. The frames are disconnected, and if cracked, broken or badly worn they are taken on large trucks to the blacksmith shop where they are welded or patched. If a new boiler is needed, the cylinders are taken out. Otherwise, they afford the machinist a few days' work until he is ready to go on with the other dismembered parts.

When an engine is dismantled each part is attended to by a certain workman. When the blacksmith is finished with the frames, they are taken to the planer. The driving wheels are taken to large lathes where they are "trued up"; the side rods, main rods and brasses are turned

over to the "rod gang," and the valve gear, to what is known in the shops as the "link gang"; the planer hand takes charge of the guides and cross heads, and the man at the boring mill, the driving boxes. In this way the work is systematically carried on and when each part is needed, it is ready to go into place.

The boilermakers have by this time finished putting in the firebox. The frames are put back into place, and the deck is bolted on. The driving boxes are fitted to the drivers and the engine is wheeled in one of the two aforementioned ways. Then the cab is hoisted back into place, the guides are hung, the valve motion is assembled, the side rods and main rods are put up; the eccentrics, pistons, valves, injectors, etc., are put in place; and finally we are ready to set the valves. After the valves are set, the engine is given a coat of paint and taken out on her trial trip which generally lasts about two days and if everything is alright, our iron horse is ready again to withstand the hardships and abuses of another year-and-a-half term of activity.

EDWIN J. SYMNES.



Three Men in a Boat

Nineteen days out from Honolulu and still nothing had occurred to break the monotony of the trip, save a short stop at Guam to land supplies for the cable station. A light breeze was blowing, but it did not seem to modify the heat in the least.

The soldiers lounged around in groups playing poker and "shooting craps" under the awnings which were spread over the main deck, to protect them from the tropical sun. The passengers occupied steamer chairs on the promenade deck, reading, writing their journals of the voyage, and conversing with one another.

The members of the crew who were off watch were gathered together on the forecastle-head smoking their pipes, telling stories of their experiences, and cursing the hot weather.

Thus the afternoon wore on. At six o'clock the dinner gong sounded and all the passengers went below to the dining saloon.

The officer on watch who had been slowly pacing to and fro on the bridge, suddenly stopped and, raising his glass to his eyes, stood gazing off to starboard for several seconds. He then lowered the glass and gave an order to the man at the wheel and the ship swung slowly

round and headed in the direction he had been looking. The sun had already set and it was getting dark but now and then a small black object could be seen away off on the horizon, as it rose on the crest of a wave. As the ship approached, it seemed to assume some definite form. Suddenly the officer on the bridge called sharply to the boatswain to man one of the smaller boats and lower the gangways.

A heavy rain now set in and the object was lost to view, but still the ship headed in the direction in which it was last seen. By this time there was great excitement on board, the saloon was deserted, and everyone was on deck leaning over the railings and peering into the darkness ahead. The vessel slowed up now and as the search light came into play, the object was again located about five hundred yards dead ahead. As the first shaft of light fell upon it a great shout went up from all on board.

"Tis an open life boat!" they cried.

"See! there are three men in it!"

"The man in the bow is hailing us!"

As the ship drew nearer, the dip of the oars was plainly visible. The excitement became intense, the shouting ceased, and a silence hung over the vessel. The engines had stopped and the only thing that could be heard was the dash-

ing of the waves against the side of the ship. All were now straining their ears to catch any sound that might come from the approaching craft.

The boatswain and his crew were in one of the ship's life-boats awaiting orders from the bridge to lower it over the side.

As the object came within one hundred yards of the ship it gradually changed in form from an open boat manned by three men, to a huge log with several large gray birds flopping around on it. A great burst of laughter came from the people aboard the ship as they beheld the transformation, and it was answered by the screaming of the birds on the log, who seemed very much disturbed by the noise and the glare of the bright search-light playing upon them.

The ship now resumed her course and the passengers returned to the saloon. The sailors gathered again on the fore-castle-head, lit their pipes, and told stories of ship wrecks and adventures in many lands. The soldiers lounged around on the main deck till the call to quarters sent them all below. A quarter of an hour later taps sounded and all was quiet for the night. Nothing broke the silence but the call of the lookout from the "crow's nest," as every half hour he answered the toll of the bell with the call, "All's well."

W. E. DRAPER, '05.



True Sentiment

The sun that summer's day had set
 As by the corral gate we met,
 I stroked her soft and glossy hair
 Which in the evening looked so fair;
 Her soft brown eyes looked into mine
 As though to say, "I'm ever thine,"
 I had to leave, I made my bow
 As I bade adieu to my Jersey cow.

The Rise in Fame of "Plough-horse" Gregg

An accident caused the discovery of "Plough-horse" Gregg, and it was a source of great rejoicing that it occurred. "Plough-horse," or William Harrison Gregg, as the registrar knew him, was a big, clumsy, country boy. He had pitched hay and worked on a farm so as to earn money to come to the big technical school at the metropolis.

The students of the school were excited over the coming football season. Student rallies, rooters' meetings, and numerous collectors with the familiar, "Got your athletic dues?" were novelties to Plough-horse and he took keen delight in watching the way that the Board of Managers aroused enthusiasm. But his special delight was to watch "Tug" Roberts, the big left guard and star of the team, smash through the line and block the plays in the practice games.

Plough-horse stood one day with a crowd of students worshipping the coach. The coach was a great Eastern college player and was Gregg's ideal. He was telling a story of his prep. school days, how "for three years I got out and bucked against the team, but when they did give me a chance, I showed them." That little sentence started Plough-horse. He was thoughtful and not so intent on watching the team as usual. He passed a sleepless night and the next day he stammered out to the Captain, "if he didn't have an extra suit 'cause I'd like a chance at the game."

That afternoon he was on the field, clad in a striped jersey and padded pants. It was then that he realized his real strength. He was as big as "Tug" but was awfully clumsy. He didn't begin to feel confidence in himself for quite a while, but gradually he got into the game and when he stopped Roberts on one of his famous "guard-back" formations, his heart beat high.

He stayed with the practice for the two months before the series of games commenced and then had the satisfaction of being placed on the sub-team. The league turned out as everyone expected. His school and their chief rival beat every other school, but tied on the final match. Two weeks were allowed between that and the deciding game.

Great was the rage of the students when the Principal informed "Tug" Roberts that he must drop football, for, alas, "Tug" in his hard training had neglected his studies, cut recitations and flunked miserably. Consternation reigned throughout the student body, for the star player of the — High had played against Tug. Who would stop his rushes? The team, the students and even the faculty were anxious. All but the coach, who started in on "Plough-horse" to get him into shape. The hard training had made him quick on his feet, had taken the stiffness out of his muscles and had given him confidence. The coach realized this and said, "Gregg, you must play against McCarthy and you've got to hold him." Then he started him in on signal practice and coached him on the fine points of the game. The two weeks seemed to fly by and hardly before he knew it, Gregg came trotting out on the field as a varsity player on the day of the match. For a while he had a bad case of stage-fright, but after running a few practice plays, he quieted down. The captains tossed up and the other team took the ball. He repeated over and over the last words of the coach, then gritted his teeth and resolved to hold McCarthy or die. Then the whistle blew.

Plough-horse blocked his man, but turned to find that the half-back had been downed in his tracks. They hit the line twice but did not gain. Then the full dropped back for a punt and lifted it clean for fifty yards. McCarthy didn't get through to block that kick and began

to think that the game wasn't going to be a snap.

Back and forth the ball was carried, first one side having the advantage and then the other. The excitement was intense. The rooters were yelling themselves hoarse. Everybody was on his feet, shrieking at the top of his voice, or groaning in dismay according to the way the game went. Then the whistle blew and the first half was over.

Plough-horse lay on a bench in the dressing-room, sucking a lemon. He did not hear the coach call the captain aside and when the second half began, he was surprised when the quarter yelled, "Left guard back," and gave the signal for him to carry the ball. He plunged into the line with all his strength, expecting to be hurled back for a loss. Strange to say, the players seemed to melt before him and he kept on—on—then suddenly hit the ground with a bang! He

was dazed when he stood up, but heard the fellows yelling like demons and the captain saying, "Fine, old man, that was ten yards."

Again and again he took the ball. Oh! it was glorious to see him tuck the pigskin under his arm and plunge into the line for long gains. Once he was knocked out and everyone was still, but when he came to and stood up, they yelled like fiends. But when he was pushed across the line for a touchdown just as the whistle blew, he heard a mighty roar and hundreds of ribbon-bedecked boys swarmed upon the field and, lifting him on their shoulders, did the serpentine. He was happy, and when he went to bed that night, bruised and tired, after having been toasted at a banquet and sung about in a show, he realized that he was no longer "Plough-horse" Gregg but "Our Billy" who saved the game.



In the Fields of Elysium

(Continued)

"It was during my second year that I became acquainted with a student of the same university but of a different college. I never can say how the attachment sprang up, for we were entirely different in nature. He was known to his fellow students as a dreamer, but in later years he put his dreams to good practice, for he became the foremost poet of his age. I myself, as I became more involved in science, must have appeared to the outer world somewhat like a person who had strayed from his own planet and tried to make his home in another. My only pleasure, or habit, I should say, was to stroll in the beautiful garden of the university. Here, every evening, after I had finished my experiments, I would plan the work to be accomplished on the following day. I soon came to be known as the wisest man in the university, capable of

teaching even the highest of instructors that the college could furnish. I remember of one instance when the university president came to me, wishing to be informed on certain points in science. I received him with the most profound dignity, and then explained to him in a way that made him feel that a more learned man than I could not be found in Europe. In the last hundred years I have somewhat shaken the burden from my shoulders and take more part in the pleasures of life.

"About a year after I became acquainted with the young poet I began to experiment more deeply into man's existence. My first trial was to bring back to life animals that had died an unnatural death, as drowning. This I performed quite readily, for all I had to do was to refer to the book of Indian philosophy. I remember one

day in one of my walks I came upon a funeral train. Seeing the weeping mother and the small white casket that was being lowered into the ground, I became convinced that I could grasp the child from its untimely death and at the same time relieve the sorrow of the parents. Commanding the coffin to be raised again, I after removing the lid, took the child from its casket and administered to it a few drops of my restorer. After a few moments I was rewarded for my trouble by seeing faint signs of the returning spark of life.

"From that time on I performed numerous experiments, taking good care not to let them become known, for at that time the uneducated masses were very superstitious. My poet friend who had also become deeply interested in my research, began to plan still greater paths for our study. As a dreamer he was accustomed to deal more with the spirits and souls of men than with their lives. In one of his talks he mentioned that it would relieve the world if some one would trace the journey of the souls on death. I had read certain passages in my Persian manuscript dealing with the transmigration of souls, so I decided to attempt to solve the problem.

"After struggling many months over the question, we finally managed to perform the operation upon animals. By certain drugs that we administered to our subjects we were able to change the solid animal life into a clear, water-like fluid. Then by slow evaporation this liquid would pass off in the form of a dense blue gas, taking its flight toward the fields of sleep.

"Our next great task was to convert these gases or souls back into their bodies. It made us feel rather ghostly to have our subjects floating calmly over our heads, but as we were working for the good of mankind we struggled bravely on. One day, holding a page of my Indian philosophy before a red light, I was amazed at the discovery I had made. The red rays of the light had caused a complete reaction to take place upon the parchment. Instead of reading

the old faded writing on a certain view of Hindoo religion, I found to my surprise that before me, in plain, bold script, was a complete solution of the problem that we had been trying to solve. That night, performing the experiment in the last quarter of the moon, as the writer indicated, we liberated the animals from their unearthly captivity.

One poor cat, I remember, appeared without a tail. This part of its body I had used to satisfy my desire to test the reaction that had taken place upon the body of the animal. When the last cat had scampered away into the darkness of the night, we sat down to rest. As the excitement began to die away, I felt somewhat strange. A weird and ghostly feeling crept into my veins. Looking at my companion, I found him deadly pale. Catching my eye, he seemed to stare down into my very soul. At last with great effort he managed to speak.

"'Shall we?' he whispered, in a voice that sounded miles away.

"'Yes,' I nodded back.

"With this he produced two slips of paper and bid me choose. I was not long in dallying over fate. Taking one of the projecting slips, I sank back with a ghostly smile. I had won. Yea, won the chance to take the first trip into the regions of the unknown.

"On the first of April, 1628, as I wrote in my diary, I left this earthly sphere. When I started I did not have the least idea what was before me or I would never have attempted such a foolhardy trick. Upward, upward I ascended, past the clouds, past the stars, and finally past the sun itself. Up to this time I had been traveling with lightning speed, but when I reached this high altitude, having passed all visible objects, my speed began to grow less until I at last stopped. I had reached the heavenly paradise.

"To attempt to describe the scenes that I witnessed would be impossible, for the most magnificent praises would be as slander. The whole region, if you choose to call it such, was made up of broad, level meadows. In the place of earth

or other worldly matter, these plains were composed of a substance softer than our earthly sunshine. The whole scene seemed to enchant me with a feeling unknown to mortal. I now for the first time felt inspired over the works of nature and wondered how the lesser things in the world below could fill the heart of my poet friend with sweet songs.

"Over this vast land floated multitudes of wandering souls, borne upon vibrations of music, sweeter than mortal ever heard. As I passed through the great unguarded entrance leading into the heavens I was carried along by this dreamy breeze of music. Floating along with this great wave, I noticed that most of the souls were pairing off together. Watching rather closely, I soon found the reason, for about this time I felt a great wind spring up behind me. Turning to see the reason, I saw to my amazement that an ugly looking soul had carried off an actor's wife. In the wake of this funny couple was a still stranger sight, for here I saw a fat feminine soul followed by four other little souls, all in swift pursuit of the runaway husband and father. As she passed me she yelled something about the scandals of heaven. Poor soul, I muttered; she probably had the idea that she could mince matters in heaven as well as on earth, but in this her former husband had disappointed her.

"This little occurrence put me in mind of the girl I had left in Persia. In gazing around I noticed a dainty little soul come scooping down after me with her sunbeam log, for heaven is like a worldly leap year, the girls do the courting. True enough, when she came abreast of me she asked for my hand in a way that was befitting a proposal of a grand duke. As she was pleading her cause I noticed that her eyes, which were all souls, wore a sad and haunted look. I was wise in a minute, for here was my little Persian princess, who had been true to me,

and now had come to claim her reward. As we were about to enlock our souls in unity, I saw Father Jupiter approaching us at a run. "All's up," I muttered, but I decided to see if I could not work a bluff upon the aged sire.

"'Well, Jove,' I said, calling him by his nickname and using, of course, heavenly language, 'glad to have met you.'

"'Met me be hanged! Return from whence you came!' he thundered in a voice that sounded as if he had forgotten that he was the Supreme Deity, and also that he was breaking the eleventh commandment of heaven, which is, 'Thou shalt not make impure the heavenly air with earthly slang,' and then he continued, after drawing a long breath, 'I sentence you, as punishment, to serve two hundred and fifty years upon the earth.'

"After delivering this speech he jumped into his chariot of fire and floated away.

"Bidding goodbye to my long lost princess, I returned to the earth. On arriving here I was converted back into my proper body. I then told my friend my experience and warned him to stay away from heaven unless he had a permit from Jove.

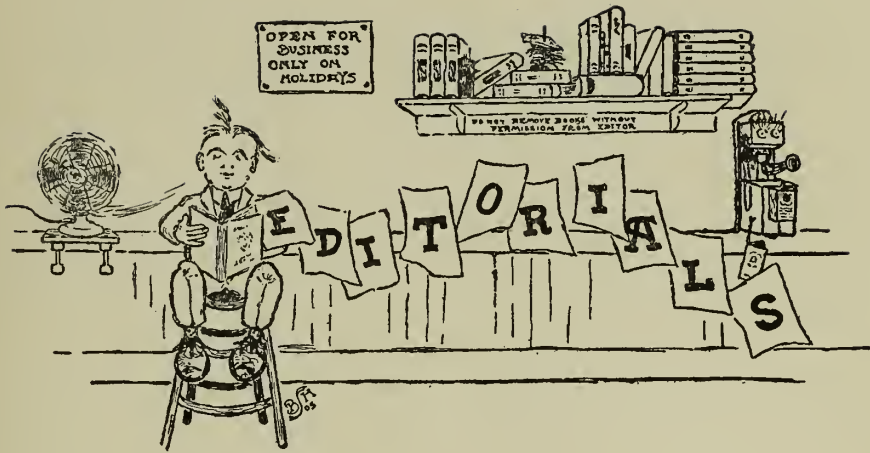
"'Couldn't if I wanted to,' he muttered.

"'Why?' I asked.

"'Well, on the day you left I dropped the magic book into a solution of strong sulphuric acid. Before I could save it, its soul, too, had gone to the isles of sleep.'

"The loss of my valuable book was the beginning of the end, for I soon lost all interest in higher science, and for the last twenty-five years have done nothing but follow a golf ball on its daily rounds. There's nothing more to add, except that I have never fallen in love, at least not so you could notice it, for I know that my true affinity has already gone to heaven."

IRVING MARKWART, '04.



THE TIGER

Freeman W. Bowley, '05 - Editor
Herbert S. Johns, '06 - Business Manager

ASSISTANT EDITORS

Chauncey Carr, '05 Exchanges
Marius Hotchkiss, '05 Athletics
Minnie Harris, '05 School Notes
Fred Jackman '05 Shop Note
Edward Poorman, '05 Joshes

ASSISTANT BUSINESS MANAGERS

Donald W. Day, '05 Edgar Randall, '07

ARTISTS

William Henderson, '06 Harriet Park, '06

THE TIGER is published every quarter by the students of the California School of Mechanical Arts (founded by James Lick), at 16th and Utah Sts., San Francisco, Cal.

Subscriptions—\$1.00 per annum. Single copies, 25c.
Advertising rates upon application to Business Manager.

Exchanges address to C. S. M. A.

Anniversary Number

January 3, 1905, will be the tenth anniversary of the formal opening of the Lick School. To

commemorate this event, a large Anniversary Edition will be published in place of the regular Christmas number.

On September 21, 1875, James Lick executed a deed of trust, by which he provided for the founding of our school. The actual work on the school was delayed by prolonged litigation, but on January 3, 1895, the buildings were completed and the school formally opened. We all know the school's history since that time, how it was improved and enlarged until it reached its present state of excellence.

The production of this number, which will be dedicated to those whose labor raised our school to its present state of efficiency, is one way that we can show our gratitude for the benefits we have derived from the work that they have done.

We trust that the students will co-operate with the staff in making this issue a grand success.

Harry Deane's Bribery

There was a look of satisfaction upon the handsome countenance of Harry Deane as he stepped out of the elevator of the hotel where he was staying. He walked into the street, with his large dress-suit case in one hand and with the other he jingled the money in his pocket. It had a pleasant ring to his ears. His pulses were thrilled with the excitement of the coming Field Day. For two long months he had trained and countless times he had run on the track. His watchful eyes swept keenly to the right and then to the left, seeking in vain to see some acquaintance. He strode along the crowded streets murmuring to himself. He was sent from England to represent that country in the Olympic games at the St. Louis Fair.

Harry Deane was an athlete who ranked high in the estimation of his associates. While he was a mere boy he ran as a representative of his school at the minor Field Days held in England. He was only defeated once and that was by an American boy, Fred Claton by name. He was studying at the same school as Harry and both were coached by the same person.

Harry entered the college of Oxford at nineteen and it was here that he gained the reputation as the world's fastest sprinter. In the dual meets between Oxford and the American colleges, he had always looked forward to a first place in all the sprints he entered. He was the star of their team and was captain of it for two years.

It was in his Senior year at Oxford that the St. Louis Exposition was opened, and on account of his excellent showing on the track he was sent to represent his college as well as England, in the sprints. While crossing the Atlantic he met another athlete, by the name of Frank Walker. They spent many an enjoyable day together and soon became real chummy. One night Harry was on deck lying in the steamer

chair and looking into the everlasting heavens dotted with stars. While he was in this position he heard his name called and he straightened himself in his steamer chair and looked in the direction he heard the voice. It was Frank's and he rose to meet him.

"Hello, old boy. How are you?"

"I feel fine and it seems that I could do myself credit in a race, if it were to be held now."

"Well, I wish I could report the same."

"Where have you been keeping yourself?"

"I was just in the smoking room and smoked a couple of cigars. Don't look at me in that way, I always do that."

"If you kept better training laws, I think you would find yourself in better condition."

"Say, old chap, I have a proposition I want to lay before you and if you accept, we can get some money quickly."

"Well, go on."

"Harry, I know you can beat me in the sprints, for I have heard of you before. If you let me win, I will put all the money I have with me and all that I can get, on myself and when I win I will give you half. We'll have enough to last us for a while."

Harry looked at him. The scheme was good. Should he give in to this man? Something told him not to. Soon his will power gave way; and he rose.

"By Jove, old man, I'll do it! I need the money and perhaps no one will find out."

It was on this account that Harry was walking to the fair grounds with his hand gripped firmly around the handle of his Russian leather suit case and a smile on his face. In his coat pocket was the morning copy of the St. Louis Daily but his mind seemed to be entirely concentrated on the coming race.

He went directly to his dressing-room and prepared for the race. He was barely half

dressed when a knock was heard at the door and a heavy set man walked into his room.

"Well, what do you want here," said Harry.

"Look here, Harry Deane, I know you can win this race. I know you have been bribed and want to forfeit this race. I know if you don't win I will kill you before you pass the tape. I have bet all my money on you thinking that this race was made up of good sportsmen and not of thieves. Harry Deane, I will be at the finish line and if you don't win I will shoot you like a dog."

Harry was amazed.

"Lies, lies, all lies," muttered Deane as the stranger walked out.

"The old fox," sneered Harry after the man was gone. "I wonder where he found that out."

The whistle blew for his race and as he walked out on the track, with his robe drawn around him, he saw ahead of him the man whom he had just talked to. His frame shuddered and he ground his teeth. He must win. He walked to his place and his heart was jumping. It seemed to him it was in his throat. He dug a place for his feet with his spiked shoes. He went down on his knees and tried a few starts. As he sprinted for ten or fifteen yards the crowd's attention was drawn towards him.

He heard the starter shout "On your mark!" He got his feet in place and looked down the line of kneeling men. Was that Fred Claton entered in his race? He leaned over a little further and, sure enough, it was his old school-mate, who had beaten him in his younger days of track sport. He ground his teeth once more and dug his spikes into the ground. He looked once more up at the finishing line. The man was there. He saw before him a paper with the following heading:

"Harry Deane was shot and killed for cheating in a race at St. Louis."

He thought of his mother in England. What would she say to a heading like this? He was in the clutches of death. Here was the only

athlete who had ever beaten him entered in his race and there was the only man who ever threatened his life.

"Get set!" and the entire line of men rose from their knees and braced themselves with their hands. Once more Harry looked down the line of sturdy track men. If he could only beat Fred Claton. Could he trip him up without being seen? No, he would not do that. He would run for his life.

"Bang!" went the pistol and Fred Claton started like a tiger. He was leading and Harry looked ahead and set his feet firm upon the ground and worked for all that was in him. It seemed that he was gaining. Now he was a yard behind. On he ran—he was nearing the finish and still was gaining. The crowd was standing and cheering and looking with eager eyes. A murmur ran through the crowd, Claton had sprained his ankle and had just thrown up his hands and Harry shot ahead. The cries were intense. Harry had reached the tape and it broke squarely across his broad chest. He had won his race!

As he was walking back to his dressing-room he saw a boy running towards him. He stopped and waited. It was Frank Walker.

"I'm sorry, old man, sorry. I could not help it. I had to win that race."

Walker looked up at him with tears in his eyes and said:

"Harry, you ruined me. You did not keep your word. I am completely cleaned out."

"Frank, you do not know how sorry I feel for you. Come up to my rooms this evening and I will straighten out matters with you. I showed you and the entire world that an Englishman can be a true sportsman."

"Good-bye, old chap, I'll see you this evening."

"Has anyone seen Fred Claton? I want to shake hands with him."

S. L. HYMAN, '05.



School Notes



This is to the general public, for all at school have certainly heard of the tragic death of Smock. On the seventh of this month the foot-ball boys, all in fine spirits, adjourned to the field back of the school for their usual evening practice, and so did their "dear" coach, Smock. All were happy and free from care for none knew of the tragedy soon to darken the doors of Lick. While tackling, one of the squad made a violent spring and grabbing Smock where his knees should have been, threw his body to the ground—but not so his head, for with the shock of the contact, this part of his anatomy had flown high in the air and coming into position again had remained poised, at exactly the same spot it had occupied before its displacement. This was a tragedy, but it soon resolved itself into a comedy, when a seamstress was found who mended poor Smock. And now, none the worse for wear, he hangs, and takes without a murmur all the blows and punches that a well trained foot-ball team gives to a tackling dummy.

At the First Unitarian Church, on Thursday evening, the eighth, two of our former students were joined in the happy bonds of wedlock. They were Miss Edna Talcott and Mr. John Hammond, both of '00. May we offer our congratulations, Mr. Hammond?

On the fourth of August we had a large rally in the hall, for the benefit of the "Freshies,"

just to show them what we could do in the way of talking and yelling and how we did it. During the course of the meeting Messrs. Hill and Bowley were elected yell-leaders and we feel confident that with two such coaches the other schools will find it hard to come up to us in the art of rooting. Besides the representatives of the different sports, several of the teachers spoke and at one-thirty the meeting closed with cheers.

Lewis F. Halloran, the ex-president of the '05 class and ex-editor of the, "Tiger," is now a Freshman at Stanford, and we all certainly wish him luck.

The girls' basket-ball grounds, although not quite finished, can now be played in and those who are trying for the team make good use of their opportunity. The boys are practicing out in front of the school again and if they keep on we will have a winning team.

Course XI Sr. started a class in Radiant Energy on the twelfth, under the instruction of Miss Bridgeman.

Our orchestra is progressing rapidly under the leadership of Donald Day and, as it now is practicing regularly, it will not take long to master the new music it is now studying. It is not an uncommon occurrence during foot-ball practice, now-a-days, to see a fellow skim down

the field to, "Bedelia," or five minutes later to see him come down with a crash when tackled, while the familiar air of, "Never Throw Your Father on the Floor," rings mockingly in his ears. I wonder if Donald Day's ears ever burn?

On the twenty-third, Lick gave an entertainment and dance for the benefit of the Athletic Fund. Everybody had a fine time and, as there was a large attendance, we may take it for granted that its chief purpose was accomplished.

Hurrah for the class of '05; did you ever see such a class before? The first thing that the class did, after electing their officers and adopting a constitution, was to select a cap and a class pin. The pins, well, I guess you have seen them and the same way with the caps, they both speak for themselves, but as to the dance, never fear, it is coming and if you don't have a good time it will be your own fault, not the fault of '05. Owing to Mr. Halloran's leaving us the presidential chair was left vacant, but on the fourteenth Mr. Jackman was elected to fill it and now all are looking forward to a quiet, peaceful (?) year.

Ollie Smith, a former student of the school, is Fourth Executive Officer on the Army Transport, "Thomas," and is now in the Orient.

Mr. Merrill is evidently in league against the bootblacks, for he has prohibited certain Seniors from soiling their shoes with the dirt of the foot-ball field.

The '07 class have appeared in their new class jerseys and they make a good showing. The arrangement of the class numerals is very neat and reflects great credit on the designer.

There was a try-out for the track team on the Wilmerding track at 2:40 Monday, September the twelfth and our boys made a good showing.

About two months ago, a stork visited the home of Mr. Hollis, our former chemistry instructor. We extend our congratulations to the happy couple.

The Camera Club arranged a launch ride, but a misunderstanding with the boatman, caused it to be postponed.

Don't forget the Alumni Association's Leap Year party on September 30th.

A debating society has at last been formed in our school. Some of our energetic students got together and, with the aid of Mr. Merrill and Miss Southwick, organized the society and now it is well under way. Every student of a high school ought to be able to stand before an audience and express his thoughts in a clear manner. This is just what debate develops. A debate will be held every Friday and each member in rotation will take active part. The society has hopes of joining the California Debating League and to compete for the trophy. We wish the society success and hope that they will bring the cup to Lick.





That the exchanges for this edition will be very limited may be accounted for when we consider that it was only about a month back that the special Alumni number was issued. But it seems strange to us that within a month we have not received more. If we had not done our part in exchanging, we could readily account for this decrease. The only conclusion we can draw is that probably the meaning of the word "Exchange" is not understood. We stand ready to be convinced that it is.

We have received but three exchanges; "The Olla Podrida" from Berkeley High School, "The Far Darter," from St. Helena High and "The Blue and White" from Sacred Heart College, San Francisco.

Well, the Olla Podrida has not disappointed us. We have received two issues within a month. The new cover is certainly very attractive and appropriate, as also are the cuts and the arrangement of the several divisions. Among the editorials in the edition of August 11, '04, we find the editor thinks that the josh column is the principal part of a school paper and that when the paper is criticised, the josh column is generally the part criticised. We beg to differ. That the josh column is an important factor, we are ready to admit, but when it comes to saying it is the *most* important part, we object. The editorials, the stories and the exchanges are the foundation of a good paper and therefore the parts which are most criticised. A paper in order to succeed must be composed of such mat-

ter as will interest outsiders as well as those in the school. We find in the August 11th issue a very small exchange column and the reason for its being so, but in the later issue; it cannot be found. We hope that such an important factor will not be omitted hereafter.

"The Far Darter," has favored us with an exchange for the first time. It is one of the neatest and best written papers we have as yet received. The way in which the editorials, as well as most of the stories, are written up show that artists in work of this kind are not lacking in the St. Helena High School. "An Awkward Situation," "The Alarm Clock," and "In Days of Chivalry," are very clever little stories.

The way "The Blue and White" have begun their career looks very much as if they intended to succeed. You certainly have our best wishes. The cover, cuts and the general appearance is very pleasing to the eye. The editorials are very good. We hope that the exchange column which should appear next month will be of great benefit to you. No paper is complete without it.

In looking over the various schools and their papers we are surprised to note that the Polytechnic School is without a school paper. It cannot be that a school of such high standing has not the talent. Can it be the faculty? Surely no, for they would not stop such a benefiting project. If this is not the case, what is it? We wait for a reply.

The Attack on the Tower

It was a calm and pleasant day when thirty young heroes, defenders of the life and property of the Lick government, left their stronghold of brick and cement. Their mission was a secret one, but had been known by the heroes themselves a month ahead of time. The army was made up of the knights of '06 under the leadership of the great tactician, General Kalmus. On either side of the General were two seasoned knights of '05 fame.

Well armed were these soldiers and very well indeed did they carry their weapons. Being the mighty sons of Lick, they had no use for such animals as Arabian steeds. Besides the general armament of spear and shield which were carefully carried by the men; the army possessed a large seige gun, which was manfully pulled along by the sturdy men who marched at the side of the general.

Across the parade ground, where even that day a hard battle had been fought, did they valiantly march in Chinese order. The spirit of adventure was too strong for some of the younger men and they rushed pell mell ahead of their leader to get first shot at the enemy. This of course was not according to regular army rules but the general did not like to dampen their spirits and let them pursue their way. The two seasoned veterans at the sides of their commander were also imbued with the same spirit but they did not give vent to their feelings like the younger men, partly because of the seriousness of their position and also because of the fact that they were under the watchful eye of Commander-in-chief Merrill, who that day had ruled them off the parade ground because of their participation in a friendly, but unauthorized, scrimmage between rival regiments. Past the movable tower of the strong man, La Coste, did they valiantly march. And as they passed his mysterious works, the strong man ap-

peared, with his brawny assistants and cheered them on. After a trying march through water ruts and over iron embattlements they came in to the rocky and dusty valley of Fifteenth.

After the commanding general had secured a favorable position from which he could see all the proceedings, two scouts of Sierra Club fame were sent forward with their long signaling poles. By this movement the men behind the great gun were enabled to get an idea of the location and the size of the tower which they were going to attack.

The excitement was intense; great beads of perspiration stood out on the brows of the heroes as the two seasoned veterans leveled the gun. A silence most profound and prolonged overcame the men. Everyone was waiting for the shot when a hatless and excited scout broke into the circle. Simultaneously was heard the clatter of horses' hoofs in the rear. The scout just had breath enough to whisper, "Ammunition for the enemy." The great gun was hurriedly turned about, and just in time for at that moment a cavalcade of three ammunition wagons for the enemy swung around a curve. The enemy saw the odds which were against them and meekly surrendered. Then the gun was again aimed at the tower. The veteran made a signal to the scouts. Another silence and then rang out in the clear air from a voice of triumph, "I got it!" The younger men cheered with vigor but their joy was soon dispelled when the general said "Well done, Bowley, but a little too high." Then the veteran White took aim and fired, but his shot was too low, and the commander reluctantly called on one of the younger men to try and land a telling shot.

But of no avail. Awed by the invulnerability of the tower and the great number of gaseous bullets which were being fired out of the top of

it, the younger men missed by a still greater margin than the veterans. Consternation overcame the men when they witnessed how futile were their attempts to land a shot in the vulnerable spot. The enemy was at the bottom of the tower and in order to get at him, it was necessary to hit the topmost parts of the fort and thus let it fall down upon him. The heroes knew this but yet they were not successful, and, goaded on by the sarcastic remarks of their gen-

eral, who previously had hit the mark, they made a very unsoldierly retreat to their stronghold.

But who were the gallant soldiers and what was the fortress? It was merely the Junior trigonometry class and their cannon was only a transit. The tower was the chimney of the garbage crematory, and, in spite of their efforts, alas, it still remains.

GARMS, '05.



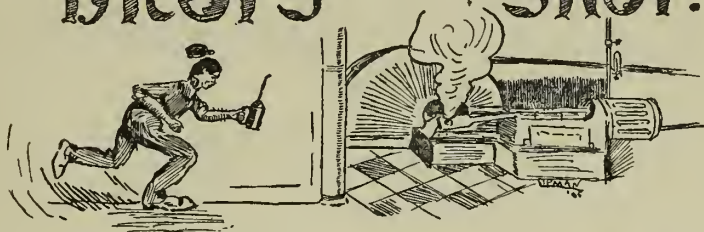
Dead Leaves

"Ye trees of the forest,
Why wail ye in sorrow?
Why bend your tall forms in pining to-day?"
The Autumn wind said as he swept from the
north,
And the gay leaves of Summer drifted lifeless
away.

"The brook's low murmuring,
The wren's cheerless chirping,
Fill Nature's great heart with the sadness of
death,
As your children are driven afar by my breath."

"Ye trees of the forest,
Bereft of your fair ones,
Weep not that the robin his song ceased to sing,
E'en dear ones of men fall silent and wither,
But cheerfully hope for the life-giving Spring."

DROPS From the SHOP.



The first year boys are making very good progress with their bench work and drawing. Apprentices in machinery patternmaking are busy standardizing designs of direct and alternating current motors so that they may be in conformity with the very latest types.

Patterns for the 8-inch sticker have been delivered to the foundry where the next step in its creation will take place. Also the pattern for the large acid pan, besides many smaller pieces are being made.

In the foundry, all the castings for two hoists have been made, and work is being commenced on the sticker machine.

Another large casting to be made is an acid pan for the Stauffer Chemical Works. It will weigh 1800 pounds, and as none of the pots will hold that quantity of iron, Mr. Lacoste is going to build a reservoir from which to pour it.

The boys are turning out lots of very good castings each week.

The boys in the forgework department are still working principally on their exercises, making bolts and gate hooks and wrestling with that impossible bending exercise, making a round circle. Others are doing miscellaneous jobs, such as forging levers and braces for the different machines under construction, and such work as comes in all the time from the outside. It's a busy place, that forge shop, and a noisy one. Mr. Mathis never did run a health resort.

And there is something doing in the machine

shop. Quite a number of motors are in various stages of construction. Among them are 4 alternating current types, ranging from $\frac{1}{2}$ H. P. to 5 H. P., and two of direct current, $\frac{1}{2}$ H. P. and 10 H. P.

A D. C. rotary transformer is about completed. It will be set on a large base, be directly connected, and used in the Physics laboratory for transforming 110 volts, 10 amp. to 15 volts, 60 amp.

The 40 amp. plater for Wilmerding school is beginning to take form. Work is being done on the shaper, emery wheel stand and band saw. Later on there will be built a drill press, two rotary pipe cutters, and a machine for cutting threads on pipe and bolts. An order is in from Wilmerding for a contractor's derrick and finishing wood lathe. Another job is one dozen wood vises for the woodworking department.

The construction of a small gas engine is contemplated. It will be about 4 by 5 inches. We shall be very glad to see this matter carried into effect as we have had very little practice on that kind of engine.

PERSONALS

The apprentices in the chemistry laboratory are acquiring knowledge not in their course. The "Hospital" is situated in their department and they daily tie up cuts and paint sprains with iodine. The decrease in the demand for bandages of late seems to indicate that the first year boys are learning how to handle their edge tools.

Mehrtens buys supplies for Mr. Woodnum.

If you have not seen the steam engine that Bulpit and Webster are building, ask Bulpit to take it out of his pocket and show it to you.

Ha! ha! ha! Mr. Smith is doing electrical work now.

What did he sa-ay?

Ask Pete.

Riese broke the clamp on the milling machine Nobody saw him. Wasn't that lucky?

Ask Trittenback what Mr. W. said to him when he split that big sheet of miconite, but get ready to run before you do.

One of the senior apprentices in the machine

shop is talking of joining the Russian forces. We shall be sorry to lose him.

Here are some bits of conversation of every day occurrence.

"Say, lend me a center punch. Will you?"

"Haven't any."

"Oh, come on, don't be so tight."

"Will you give it back?"

"Of course."

"Here it is, but don't forget."

"Where did you swipe that punch?"

"Made it."

"Strange how you came to put my mark on it. I guess you'd better 'make' another."

And he does. Same way.

This one is not said so loud. "Loan me a hack-saw blade, please. I've busted two and I will get killed if I ask for another today."



The Cowboy's Unmailed Letter

Wilcox, in Southwestern Arizona near the Mexican boundary, is a supply point for numerous mining camps which are scattered from its low walls of sunburnt brick in many directions. Not only is it a supply point for the surrounding mines, but also for large cattle ranches which are situated toward the north.

The history of this little town has rather a dramatic turn, having once been the abode of the most notorious bandits the West has ever known. Many are the tales told by idle cowboys of midnight encounters, under the dim lights of the Wilcox saloon, for saloons thrive there, and of hold-ups daring and bold; but those days are over and the town now numbers among its five hundred inhabitants many cultured people.

The white front of the Wilcox Hotel is the first object that attracts the stranger's eye, when passing through the town. Like most of the houses in Arizona, it is made of adobe, and its front is then white washed. Along Railroad avenue can be seen the housekeeper buying her provisions, cowboys strutting here and there, clinking their shining spurs upon the board walk, and the lazy peon sitting in the sun, taking his afternoon smoke. Afternoon it was and the 4:30 train was expected any minute.

Near the station stood a tall and handsome fellow, a college boy perhaps, but there in the shade of the loaded truck he looked a cowboy through and through, from his broad-trimmed Stetson to his dusty boot-heels. One would judge he had been a foot-ball hero or the star of some college nine and, tiring of the gay world, he lived a wilder life, a life of careless freedom out West in the shadow of the mountains, roping and herding cattle.

He was in all probability waiting for the train, as he had a letter in his hand. There, most letters are mailed at the train, that is, important

ones, whose matters could not afford the time it took the post-master to sort and stamp them.

At 4:36 the smoke of the locomotive curled above Eagle's Pass and at 4:45 the Sunset Limited drew up at Wilcox Station. Quite an attractive young girl stepped from a forward coach as Jack Phelton walked by on his way to the mail car. He could not resist turning around to look again at her, for there was something about her which made one unconsciously look a second time. Upon turning, he at once saw the girl was perplexed. He walked steadily toward her, arriving in front of her as a trunk was being thrown from the baggage car.

Jack took off his large hat, displaying a growth of curly, brown hair, and stammeringly said, "I beg pardon, Miss, but could I offer you any assistance? You seem to be a stranger here.

A few minutes passed before she spoke, and during this interval, Jack took the opportunity of studying her more closely. As she stood before him with her traveling duster upon her arm and a suit case at her feet, memories came floating back to him of the football field, the bleachers thronged with fair ones, waving flags and banners, cheering their team on to victory.

He was aroused by the train whistle, a puff of smoke and it was on its westward journey. The idling Mexicans were now gazing upon him, from the buildings across the way. It was no wonder, for as he stood there bareheaded, with the unmailed letter in one hand and his Stetson in the other, he appeared quite attractive.

"I thank you, very much, sir. Would you kindly inform me how I can reach Mr. Hooker's house? They knew I was coming, but I do not see anyone here."

"Well, perhaps you'd rather wait, it's quite a ways on the other side of the track. If you'll

wait, I'll ride over to the house on my pony," said he, pointing to the bronco that was standing by a bush a little ways off, "and hitch up the rig and come back and drive you over."

"If it is not too much trouble; I would be thankful to you, indeed."

"Not at all, Miss, not at all. It is so seldom we have visitors that it's quite a treat to go to a little trouble once in a while," and returning his hat to his head, and the letter to the pocket in his blue flannel shirt, he strode off to his pony, and in an instant was off.

The girl strolled over to a bench and sat down, wondering who this chivalrous fellow could be, when she was startled by hearing some one call her name, and, upon looking up, there stood Colonel Hooker, with outstretched arms, bidding her welcome to this interesting country.

"I am very sorry, Hazel, that I was not down here to meet you as the train came in, but some of my cattle interests detained me at the ranch. One of the boys came in to mail a letter and buy some bacon. He ought to have been here when the train arrived. I don't suppose you have seen him, have you?"

"Yes, I believe I have; he was very polite to me, and has gone off to 'hitch up the rig,' as he said, in order to drive me over to your house. Who is the young fellow?" asked the girl, rather curiously, of the old gentleman.

"Oh, he's Jack Phelton, one of the boys on

the range. I understand he is a lawyer by profession and has well-to-do folks back East somewhere. I'll introduce him to you; he would undoubtedly make a fine character for your new book. Here he comes with the team; you'll like him I'm sure."

Jack drove up and descended with a shy look at the colonel. As he turned to go, the old man called him back, saying, "This is Miss Hazel Lester—Mr. Jack Phelton."

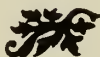
The customary formalities were interchanged and upon assisting her to the seat, she pointed to the letter in his pocket, saying, "I am very sorry that I am sole cause of its not being mailed."

"I'm glad now that I haven't mailed it. It is a letter to the folks, saying that I was coming home, to start in practicing law, but I guess I won't go yet," he said smiling. "I'll stay a little longer. You won't mind my paying you a visit some evening? I hope I will not be intruding upon your friendship, though."

"Yes, you may come," she said, blushing. "I think we will be very good friends."

The colonel cracked the whip and gave Jack a wink, at the same time reminding him not to forget the bacon for the ranch. The rig rolled off down the dusty road and Jack sauntered down Railroad avenue, whistling that familiar tune, "There's Just One Girl in This World for Me."

FRANK A. ALLEN, '07.



From an Island

On the left, the city's din and roar,
And at our back the fort's grim door,
While on our right Tamalpais green;
And through the Gate a ship was seen,
On she came, with sails full set,
Before the high wind's boisterous threat;
And from the island's highest crown
Are seen the Berkeley hills of brown,
And calmly 'neath their shadows grey
The Athens of the Pacific lay.

—M. E. SWEET, '07.



FOOTBALL

With the football season far enough advanced to show how we stand, our outlook is brighter than ever. Out of Hall, Dietz and Seminario, we have developed star half-backs. With the addition of Snell and Merritt, veterans of last year's team, we have a better set of backs than any team in the league. Not only are our backs good "ground-gainers," but they are also good on defense. In Charlie Golcher, "Puss" Thane and Getaldi, we have three very good quarters, who will hold their own with any. With O'Connor, our last year's "star," Bennie Schmidt, Deakin and Henderson, it will be hard for our opponents to circle our ends. At tackles, we have Main, who needs no comment to show his worth, Keenen and White, who, with this year's coaching are developing into good men. At guards, we have Moullen, our all-round athlete and place-kicker, Heitmuller and Murray. Our center is held down by Hotchkiss and Crow. With such men as these on the team, good substitutes to choose from, and backed up by the whole school, we believe we are the equal if not the superior of any team in the league. If the school will only turn out behind us, we will surely win.

On September 10 we played Oakland High School on our grounds and, although two of our stars, Merritt and Moullen, did not participate in the game, we out-pointed our heavier opponents at all branches of the game.

TRACK

King of all schools in track last year, we will soon know whether we will again obtain the much-sought-for position. The S. F. A. L. comes on the 24th of this month; following that, on the 1st of October, comes the B. C. L.; and next, and most important, comes the A. A. L. on October 8. If we do not win all three of these field days, it will not be the fault of our Captain Johns and Coach Powell, as both have worked hard and faithfully to turn out a winning team. Do not let your failure to make the team this season interfere with your training, as the training will help your chances next year. At our field days, as well as our football games, we expect a large crowd of students to cheer our teams on to victory.

The try-out held on the twelfth resulted as follows:

50-yd. dash Won by De Lany with Walker a close second.

100-yd. dash: Won by Heitmuller with De Lany and Walker second.

220-yd dash: Dead heat between O'Connor and Charlie Golcher.

440-yd dash: Dead heat between Rogers and Mel.

$\frac{1}{2}$ mile run: Won by Dodson.

Mile run: Won by Mayse with Nichols second.

2 mile run: Won by Thompson with Mil-lard second.

In the field events, the shot put, hammer throw and pole vault were won by Moullen.

This year we have developed some good relay men in Golcher, Mel and Doane. As we still have "Chic" O'Connor, Johns and Dodson, members of our last year's star relay team, our competitors will have to go some to take this event.

With this collection of point-winners, we ought to bring victory to Lick.

S. F. A. L.

On Saturday, September 17, the S. F. A. L. was held, which, you all know, we easily won with 60 points to our credit while Lowell, our

nearest competitor had only 32. Johns, our track captain, was out of the field day on account of an injury received the day before, Moullen was the star of the day. He made 15 points, and broke the record in the hammer and the pole vault. Dodson ran well in the half and relay, and shows that he is in his old form. Mayes, one of our new men, captured second place in both mile and half-mile. Mel, Heitmuller, Rogers, Golcher, Doane and Thompson ran like veterans, De Lany got two seconds in the sprints. One of the surprises of the day was the winning of the broad jump by Davie Walker. As a whole, the showing of the boys was very creditable, and Coach Powell is well pleased with their performances.



A Cold Reality

The lightning roared! the thunder flashed!
 The rain came down in sheets!
 An Editor on his lonely cot
 Soaked the pillow with his weeps!

And with the passing of the storm
 A nightmare did appear!
 It racked his soul with awful pain
 And filled his heart with fear!

And now he's in a padded cell,
 A wild look in his eye!
 He shrieks and groans and tears his hair!
 And his keeper hears him cry:
 More Manuscripts! !



Mr. Willard: "Dietz, give me a definition of an acid."

Dietz: "An acid is sour but has no taste."

And in the Debating Club, they say that Gass lives up to his name.

Ambitious Blacksmith (who has just been burnt): "Mr. Mathis, what's best to do when you pick up a piece of hot iron."

Jake (in disgust): "Drop it."

Long Markwart one year longer.

IN GERMAN.

A. Currie (correcting his ex. paper): "Shall we correct this in Dutch?"

Miss O.: "Ach du liebe! do not call my tongue by that name!"

Thompson (English II E): "The schoolmaster was a son of a-er-farmer."

We haven't that kind of schoolmasters at Lick.

Little Willie found a can of
Nitro-glycer-ine;

(Little Willie after chemis-
Try was very keen);

Little Willie took the ax and
Hit the can a rap;

All that's left of Willie is a
Big hole in his cap.—Ex.

Visitor: "Why are the Lick athletes so popular?"

Bright Student: "Because they have such winning ways."

We wonder why:

Billy Powell comes to the track clad in a running suit composed chiefly of a straw hat.

Seminario stopped running and took up football?

Miss H-r-s will not show her watch fob, especially the side on which is her name.

Joe Hill missed the Senior meeting. He said an important business (?) engagement.

Dave Walker was excited on Monday, the twelfth.

"Sarah" Hall wears an '08 watch fob.

A skunk once broke up a Christian Science meeting. The leader was unable to convince his followers that they only imagined they smelt something.

Nothing worries a girl more than to discover that a man after her own heart isn't after it at all.

Mr. Willard: "Is that glass transparent?" (referring to the windows.)

Pupil: "I don't know about that, but if they were washed they would be."

A German translation: "And the gods wept in Balder's bier."

We don't blame Balder for dying.

Brief poetical quotations are frequently paraphrased, and often without any loss to the truths they convey:

There's many a slip
'Twixt the cable and grip.

While the gas holds out to burn
The meter will dollars earn.

You may smash, you may shatter the case if you choose to,
But the scent of the Limburger clings where it used to.

You must wake and call me early---call me early,
mother dear,
For if you don't the chances are I wont get up this year;
Be sure and keep on calling me---say fifty times or more,
And when I wake I'll growl because I wasn't called before.

The breaking waves dashed high---
Dashed high with a right good will;
But with all their dash they were not so high
As the seaside hotel bill.

ULTRA-DEMOSTHENIC.

"Since human tongue was given speech,"
Exclaimed the fervent Mr. Beach
In manner quite effective,
"No one of all earth's prodigies
Has ever matched Demosthenes
In terrible invective."

"Demosthenes was quite au fait,
But then you'd hardly talk that way,"
Responded Mr. Mabie,
"If you had marked the vocal scope
Of Mrs. M. when on the soap
I slipped and dropped the baby."

WITH THE LITERATEURS.

This is a Dryden of a place. How my throat Burns. Don't be so Longfellow. Pass the bottle, once Moore. The Whittier you grow, the Drier I. Confound the man, he has Lytton my favorite Bunyan. Never mind, I'll forgive you—Shakespeare to be order here. Have a Chaucer? No! Then let's go Homer the Dickens will be to pay, and there will be no Thackeray on hand to Makepeace for us.---Brooklyn Eagle.

Squire Hawbuck: Gee wiz! di ye mean to tell me yer don't make a cent on this coat? Well, would yer mind telling me where yer profit comes in?

Solomon: Yes, mine friend, I vill tell yer der secret; we gets the string dot we do up der bundles mit for nutting.

Her Dog Was an Expectorator: Miss Manhattan---What a pretty dog you have! Miss Browning (of Boston)---Yes; he is an exceedingly pretty canine for one of the expectorator breeds. Miss Manhattan---Never heard of that kind. Miss Browning---I suppose that in New York you would designate him as a spitz.--Berkshire News.

Teacher (pointing to T): What letter is that, Jimmy?"

James (densely): "Dunno."

Teacher: "Well what do papa and mama drink at supper?"

Jimmy: "Beer."---Tiger.

Music Teacher: "I'll have your daughter playing by ear in three months and—"

Father: "The amount of noise she gets out of her hands will do without you running in any more of her anatomy to help out."

Her father (sternly): "Young man, can you support a family?"

Young man (startled) "Why-er-I only want your daughter."---Ex.

Poor Freshie

No sir, I'm not going to college. I used to think it would be fine when I got old enough to enter the university, but I've changed my mind since my brother has been there. He had a fine time at college, that is, after his freshman year, but that first year was something awful. Poor Freshies; they certainly do get it hard. Bob didn't know anything about college hazing before he entered, but you bet he knew a lot about it when he'd been there a few weeks.

One night while Bob was digging (for you know all freshmen study as hard as they can) he heard a tap-tap on his door. He called, "Come in." Then, with a rush, a gang of older men of the college crowded in and before Bob could say a word, they grabbed him and, warning him not to yell, they stood him up on a two by two foot table and made him dance for an hour, while the fellows pulled his room to pieces. When the hour was up they let him get down and told him not to tell any of the "profs" and they'd let him alone.

Next night Bob heard another rap on his door, but he thought he'd not let them in, but instead, he thought he'd be quiet and make them think he was out. But he found he couldn't bluff 'em for while he sat there shaking and as pale as a ghost, staring at the door, he saw a hand appear on the transome of the door, and soon a big husky fellow, about two heads over Bob, jumped down into the room and he let the other fellows in. Then they grabbed Bob and carried him to the end of the hall and put him, clothes and all, into a bath tub filled with cold water. Bob said he never was so scared in his life. They then presented him with two tooth-picks and made him row for two hours, while they stood around saying all sorts of mean things to him. Bob said he was stiff from the cold water but still he had to keep on rowing,

for if he dared stop for a second the fellows would poke him.

One night Bob thought he'd go down to a favorite resort of the students, about three miles from the college. When he started to walk home he noticed a 'buss starting back with a crowd of boys in it. So he thought he'd get in too, instead of walking. So he called out, "Say, wait a minute and I'll join you." But he was answered, "Oh no, Freshie, walking will make you grow." So the poor kid had to walk home all alone. But he said the walking wasn't so bad, but he dreaded coming near the college grounds for he was sure some of the older fellows would be "laying" for him. He got to the gate, trembling like a leaf. Every time he heard a cricket he jumped. He walked on toward the hall where the boys slept and all was well when suddenly he saw the light of a lantern not very far off. Bob ran to the trees which surrounded the place and hid, first behind one, then another, dodging this monster all the time. He said he never was so cold in all his life. Finally he thought he'd have to find a place to sleep, so he lay down in a place where he'd not be likely to be seen. Oh, but it was cold and the ground was as hard as rock. Bob said he laid there for what seemed the whole night. Suddenly that moving object with the lantern approached him. He tried to get up but could not, he was too stiff and too scared to move. The big fellow came over to him and said "Get up!" Then Bob fairly cried and begged him not to touch him. Then the fellow said, "What's the matter, kid, do you think I'm one of the older fellows after you? Come on and I'll let you in. I'm the night watchman."

Oh no, I'm not going to college, not until hazing is stopped, and I guess it never will be.

Training of Co=Eds

Progress is the spirit of this busy age of ours; hustle is its watchword; and education is the elevator by which we get let in on the ground floor and reach the top of success. But in our haste to acquire that education, we are apt to skim over the bare essentials and thereby overlook those small concerns which, like electricity, are unseen yet powerful.

In our school course we learn those truths and laws which have made the names of Faraday and Newton famous. We are concerned over the geometry teachings of Beman and Smith; and the algebra and trig. of Wells, fill us with dismay. And while the boys are cramming such dry knowledge, the girls are giving their devotion to the far greater, but alas! too much neglected arts and sciences of dressmaking, millinery and cooking; with the accent on the *cooking*.

Now, I hold that such training of the young ladies of this state has been looked upon as not altogether necessary, too long; and to that subject I would enlist your attention. You must not suppose that I am one who is smitten with the fair ones; nay, I am content to be one who admires them from a distance. It is merely my sporting spirit, crying for fair-play, which causes my pen to raise a howl as champion of the practical education of our young ladies.

In shopwork and machine construction, the boys have learned that a special tool must be used for each item of construction, and their minds become trained to rely upon those special helps in future work. Whoever knew of a woman who had special tools to aid her in the thousand-and-one odd details which she is forced to attend to at home? The coal-man, with characteristic thoughtfulness, leaves the black diamonds with lumps too big to get into the bucket; and the man of the house can't break them without a sledge-hammer, and can't find the hatchet; and then he can't take off the ashes, for the

shovel has been lost; and so on through the calendar, he can't help his wife, sister or mother, because he hasn't the tools.

What does the lady do? She improvises tools; removes ashes from the stove with the dustpan; and breaks coal with a hair-brush. It's just there that the genius of woman shines out. Talk about the brilliant discoveries of your chemists, physicists and mathematicians! What are they when compared with the great "applied science" which our hardworking housekeepers use daily, without technical training other than that taught by stern necessity?

Take for example, such an ordinary article as a hair brush. For a man, it is useful only to brush his hair, and he sometimes regrets that he can't use it for a clothesbrush. But to a woman, its uses are numerous. To its original properties she adds others. What is more useful than a hairbrush to break those big chunks of coal, or more handy to spank the ubiquitous small-boy with? And when the sugar was all caked up by the heat last week, the girls in the cooking class used their hairbrushes to convert that solid granulated mass into the finest of powdered sugar.

There is but one function of a man's toothbrush; but to a woman, her toothbrush is as versatile as the hairbrush. While the man is stumbling around in the dark downstairs trying to find a spoon to stir the baby's cough medicine with, she has deftly mixed it with the handle of her tooth-brush. And when the windows rattle with our gentle ocean breezes, she simply jams that toothbrush handle between the sashes and stills the racket.

The man needs a corkscrew next, to open that medicine bottle; but what does she use? The always present hair-pin. And while the wild man from Arizona must carry a wicked six-shooter, her hatpin is an ever-ready and more deadly weapon.

We all read with intense interest of the life of Robinson Crusoe, and his years spent in trying to build a boat in which to escape from his lonesome isle. Why is there not the history of some poor woman's trials in a similar predicament? The reason is that whenever a member of the gentle sex was thus cast on a desert strand, with that handy hairbrush, toothbrush, hatpin and a hammer made with the heel of her slipper, she speedily constructed a craft that would defy the sea, and swiftly carried her back to civilization.

Thus through countless pages the victories of woman over the difficulties of the day, without tools and their limited knowledge of how to use them, could be recited. But we trust that a

word to the wise is sufficient. You must be convinced, on further research, that the ladies, though not enjoying (?) the same style of education as the young men, do display a genius of invention and fertility of resource, that is not often accredited to them. And the greater and more practical education that can be given to the girls will be repaid a thousand fold in the progress of the age.

You must admit that the fair sex have immense influence on the welfare of our great country; and with increased respect, in view of the foregoing facts, you will take off your hats to the young ladies of the C. S. M. A. and be always eager to shout for co-education.

CHAS. DE WOLF.

Miss C. (to cooking class): "Young ladies, do not leave any pits in the fruit or you will have *pitiful jam*."

Teacher: "Who was Rosalind?"

Student: "A character in Shakespeare's 'Are You It.'"

TRACK

SHIRTS, PANTS AND SHOES

FOOTBALL

SUITS, SUPPLIES AND SHOES

BASKET BALL

SUITS, GYMNASIUM SUITS,
SWEATERS, JERSEYS, CAPS.

Tennis Rackets
Boxing Gloves
Punching Bags

J.J. Pfister
KNITTING CO.

60 GEARY
STREET
San Francisco

Open Saturdays until 10 p. m.

Since we've catered so
much to

"THE BOYS"

our business grew so much
that we've got a

New Department

for them teeming with

"Clever Clothes"

for

"Swell Fellows"

ROOS BROS.

KEARNY AT POST

COMMERCIAL VIEWING
A SPECIALTY

PRINTING, MOUNTING,
DEVELOPING

CHAS. PERRY

KODAK AND PHOTO

—SUPPLIES—

20th and Mission Sts.

TELEPHONE BLUE 3511

SAN FRANCISCO

THERE is no building or construction work
complete nowadays without some of the pro-
ducts of The Paraffine Paint Co., who make

P. & B. Goods

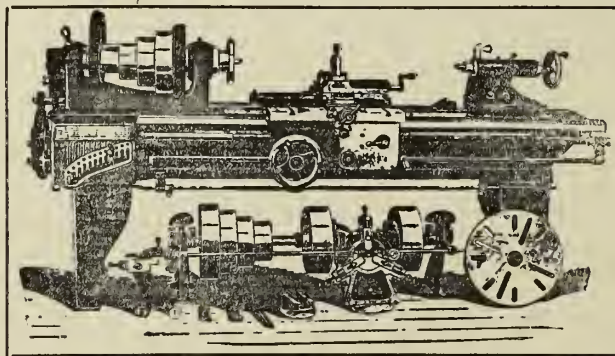
Send for Booklets,
Etc.

24 SECOND ST.,
San Francisco

PACIFIC TOOL & SUPPLY CO.

DEALERS IN

HIGH GRADE MACHINE TOOLS AND SHOP SUPPLIES



FINE TOOLS FOR WORKERS IN METAL

101 TO 111 FIRST STREET

Telephone Private Exchange 177

S. E. Cor. Mission St., **SAN FRANCISCO.**

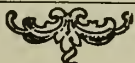
PLEASE MENTION "THE TIGER."

M. HARTJE

DEALER IN

Groceries, Provisions

WOOD AND COAL
HAY AND GRAIN



Corner 16th and Potrero Avenue

Telephone, Jessie 1783 San Francisco

Clabrough, Golcher & Co.

CALL AND SEE OUR LINE OF
FOOT BALL SUPPLIES AND
UNIFORMS. THE MOST COM-
PLETE ON THE MARKET.
GENERAL SPORTING AND
ATHLETIC GOODS. :: :: :: ::

538 Market Street

(Factory 24 2nd St.)

The Misses White Dancing School, 1400
Gough, corner Post.

What gives the best report of a fire?
A powder magazine.

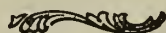
TELEPHONE FOLSOM 581

HENRY HELLBERG

—DEALER IN—

GROCERIES—HARDWARE

ETC., ETC.



450 NINTH STREET, CORNER BRYANT

San Francisco, Cal.

THOS. ELRICK.

A. L. HANSEN.

**MARKET & THIRD STS.,**

EXAMINER BUILDING.

SAN FRANCISCO, CAL.

After a long-winded argument, White sat down only to find that a thumb-tack had been placed on his seat. "Mr. White," said Miss Southwick, "Your argument is all right but you have the unfortunate habit of not sticking to the point."

A Measure of Precaution

Florid Old Lady (taking train at station): "Conductor, which is the most dangerous car on the train?"

Conductor: "The last car is supposed to be, madam."

F. O. L.: "Then why don't they leave it off?"

A. T. PANNELL & CO.

177-181 VALENCIA STREET

Near Thirteenth Street

Wholesale and Retail Dealer in

WOOD, COAL, HAY AND GRAIN

Phone South 1116

Phone Main 1379

TECHNICAL AND SCIENTIFIC BOOKS

THE ALEXANDER-YOST CO.

SUCCESSORS TO OSBORN & ALEXANDER

TOOLS, HARDWARE, MACHINERY AND MACHINE SHOP SUPPLIES

401 MARKET STREET

Corner Fremont

San Francisco

PLEASE MENTION "THE TIGER."

For Sale and To Rent

Latest Models

Snell, California, Hudson, Reading, and Columbia Bicycles and Motor Cycles.



The Cyclery

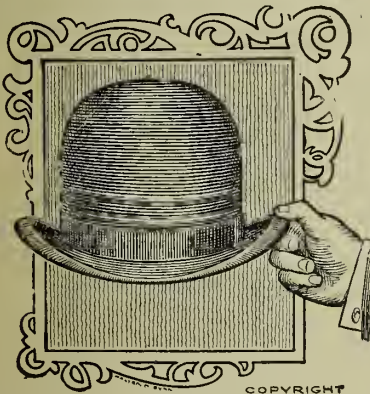
The oldest established Bicycle House in the City

W. E. LEE, Prop.

Telephone Page 5401. *Repairing and Storage*
504 Stanyan St. and 1973 Page St.

Highest price allowed on Second-hand Bicycles in exchange for any of the above makes.

Second-Hand Bicycles from \$5.00 up.



COPYRIGHT

LUNDSTROM'S New Derby
"THE BUZZARD" IT' A BIRD

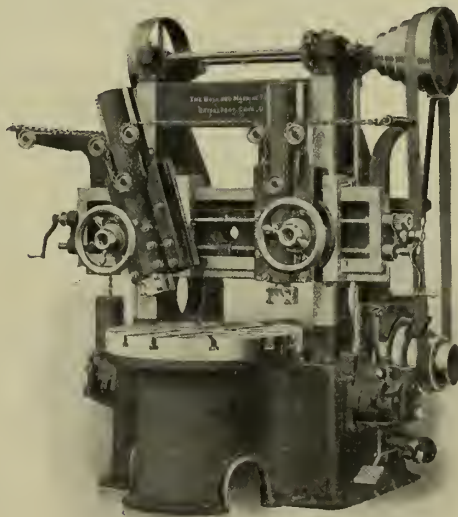
Pacific Coast Hat Works

1458 Market St., opp. Central Theatre

and 605 Kearny St.

MACHINE SHOP TOOLS

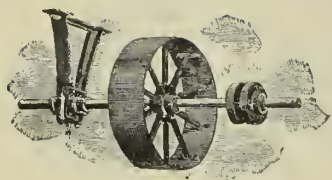
Boring and
Turning Mills
Engine, Lathes,
Drill Presses,
Bolt Cutters,
Shapers,
Turret Lathes,
Iron Planers,
Wet and Dry
Grinders



Double Spindle
Lathes,
Punches and
Shears,
Milling Machines,
Sensitive Drills,
Hollow Hexagon
Turret Lathes,
Bending Rolls,
Supplies.

Bullard 42-inch Standard Boring and Turning Mill.

Harron, Rickard & McCone 21-23 Fremont St.
San Francisco, Cal.



Power Transmissions

SHAFTING-HANGERS-PULLEYS

COUPLINGS
BOXES

FRICTIONS
SHEAVES

COLLARS
ETC

LINK BELT MACHINERY

Meese & Gottfried Company.

SAN FRANCISCO, CAL.



SEATTLE, WASH

Good Usage

Teacher: "Define narrative."

Small Boy: "It's a tale."

Teacher: "Correct, now put it in a sentence."

Kid: "The dog wagged his narrative."

Sam H.: "Mr. Merrill won't let me congregate in the basement any more."

This sounds great for Sam. Reminds one of "E pluribus unum."

Mother: "Johnny, did you go to Sunday School?"

Johnny (with a far-away look): "Yes, ma'm."

Mother: "How does it happen that your hands smell fishy?"

Johnny: "I-I carried home the Sunday School paper an'-an' the outside page was all about 'Jonah and the Whale.'"

WHITE BROTHERS

(Incorporated)

HARDWOOD LUMBER

Importers and dealers in Oak Ship Plank and Timber, Locust Treenails and Wedges, Mahogany, Primevera, Teak, Walnut, Butternut, Cherry, Sycamore, Ash, Spanish Cedar, Maple, Gum, Quatered Sawed Oak, Veneers and Dowels. Special sizes furnished to order on short notice.

COR. SPEAR AND HOWARD STS.

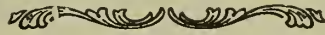
SAN FRANCISCO

PLEASE MENTION "THE TIGER."

E. E. GIBSON

OPEN EVENINGS

Photographic Supplies



BROMIDE ENLARGEMENTS

2204 FILLMORE ST.,

DEVELOPING AND PRINTING

Telephone Jackson 441

SAN FRANCISCO

Our newly elected editor is certainly an original joker; he let a piece of candy fall the other day and humorously exclaimed, "Oh! listen to the lemon-drop."

We need but to print his name in these columns to cause mirth and laughter.

Mr. Kalmus (in Strength of Materials):
"What is dry-rot?"

Wise Student: "The study of History."

Teacher: "How old are you Jimmy?"

Jimmy: "Two years older than Johnny."

Teacher: "How old is Johnny?"

Jimmy: "You can search me."

"Full well they laughed with counterfeited glee,
At all his jokes, for many a joke had he."

Dedicated to the Mechanical Drawing Class
by Oliver Goldsmith.



"GARLOCK"

This means

*STANDARD OF QUALITY
and a household word in the
Machinery World. : : : :*

Garlock Packings are made in two hundred styles
of Packings and Gaskets for all packing
purpose—each recognized as
a standard in
its class

THE GARLOCK PACKING CO.

537 Mission Street

Send for free sample.

SAN FRANCISCO, CAL.

PLEASE MENTION "THE TIGER."

NEW GOODS



We are opening up new goods for the holidays. Everything that is new and pretty in fine *Gold Jewelry and Novelties in Sterling Silver*. Have you seen our *Miniature Hammers, Monkey Wrenches, etc.*, at **25** cents each.

SEND FOR CATALOG

Brittain & Co.

JEWELERS

Phone Main 5360

120 Geary St.

PLEASE
PATRONIZE
OUR
ADVERTISERS



The Overall Laundry and Supply Co.

JOS. T. CAVANAUGH, Prop.

CALLS MADE EVERY FRIDAY AT 4:30 P. M. AND DELIVERIES MADE MONDAY 8:30 A. M.

BUTTONS SEWED ON AND MENDING DONE

Overalls	-	-	10 Cts.	Blouses	-	-	10 Cts.
Overalls, with Bib	-	-	10 Cts.	Aprons	-	-	5 Cts.
Jumpers	-	-	10 Cts.				

Telephone **SOUTH 303**

SPALDING BUILDING

SAN FRANCISCO

PLEASE MENTION "THE TIGER."

John Finn Metal Works

SAN FRANCISCO, CAL., SEATTLE, WASH.,
313-315 Howard St. 1255 First Ave., South



Manufacturers of

Babbitt Metals

SOLDERS

PHOSPHOR TIN

GALVANIZING



Pretty Far Gone

"I think the seediest railway line in the world is the one that runs between — and —, out West," said a traveling man, who recently returned from an extended trip. "We were crossing a stretch of prairie-land, when the train suddenly stopped for no apparent reason. After a wait of almost an hour the conductor came sneaking through the train, glancing furtively at the exasperated passengers as he passed. When he came to me he stopped and leaned down. 'Say,' he said, 'have you got a piece of string? We want to fix the engine.'"

"Pa," said Tommy, opening the paper, "who sits on the seat of war?" "No one," responded papa, "because the seat of war generally has a tack in it."

A visitor, looking at a picture of last year's track team, wanted to know if Dodson was advertising a jewelry company.

He: "May I kiss you?"

She: "Not much."

He: "All right, I only wanted one or two."

EUGENE DIETZGEN, LD.

... Manufacturers and Dealers ...

DRAWING INSTRUMENTS
DRAWING MATERIALS
SURVEYING INSTRUMENTS

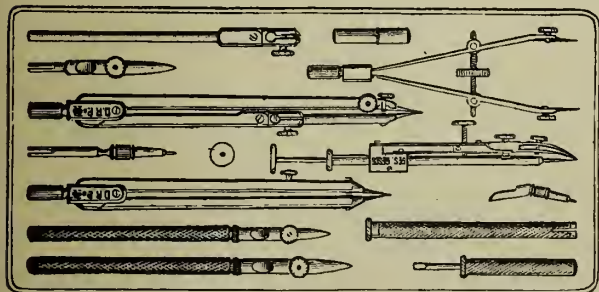
14 FIRST STREET

San Francisco

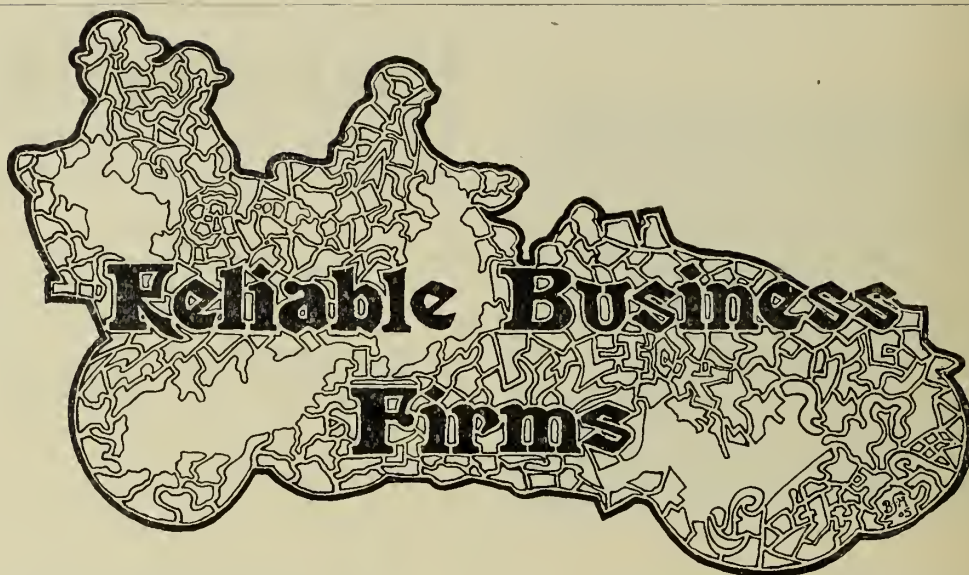
New York

Chicago

New Orleans



PLEASE MENTION "THE TIGER."



P. N. KUSS CO.
 PAINTS, OILS AND VARNISHES
 638-640 MISSION ST.
 SAN FRANCISCO

JOHN WICHMAN
 FINE CANDIES AND
 ICE CREAM
 485 Valencia St. San Francisco
RESTAURANT and CHOP HOUSE
 JOHN SKANCE, Prop.
 546 NINTH STREET
 SAN FRANCISCO

Cram,
 'Zam,
 Flunk.
 Trunk.—Ex.

ENTERPRISE SHAVING
and HAIRCUTTING PARLOR
 2814 16th STREET
 Cor. Folsom SAN FRANCISCO

HENRY A. STELLING
 GROCERIES

2851 16th St. San Francisco

D. B. BOWLEY
 FIRE INSURANCE
 OFFICE RESIDENCE
 405 California St. 233 Sanchez St.

He: "The unexpected always happens."
 She: "Not always, you never say anything clever."

B. A. HESTER
 Tennis Goods :: Candies
 Sodas and Celery Phosphate
 608 Stanyan St. Near Haight

A. HUCK
 PAINTS AND VARNISHES
 2875 16th St. San Francisco

PLEASE MENTION "THE TIGER."

Mrs. M. DETTLING

Confectionery
and Varieties.

SCHOOL BOOKS,
STATIONERY,
NOTIONS,
DRAWING INSTRUMENTS,
ETC.

386 Utah Street

San Francisco

Restaurant and Bakery

MR. M. DETTLING. PROP.

Del Monte Creamery

Supplies Families with

MILK

ADDRESS

386 UTAH STREET, Near Seventeenth

Telephone Jessie 1789, San Francisco

We wonder who they were, who partook in the enjoyable evening at the Misses White's High School Dancing class last Saturday evening.

**We Sell } Educational
BOOKS } Library
Reference
Holiday**

Wholesale and Retail

When you want a book of ANY KIND send to us. Our new complete Catalogues sent gratis on application. ❀ ❀ ❀

The Whitaker & Ray Co.

PUBLISHERS AND BOOKSELLERS

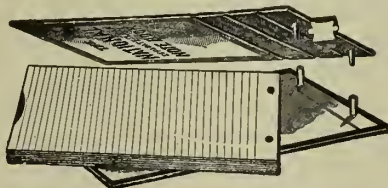
San Francisco

711 Mission Street

Illustrating the National Note Books



Showing the Closed Book, substantially bound in heavy Art Cloth (assorted colors); also the new safety catch on the clasp, a feature recently added.



Showing how the Covers Separate to take in the paper, and the quick, easy method of removing completed work and renewing the leaves. Also showing the Index permitting use of one book for several subjects.

Used in all Grades of Educational Work

PLEASE MENTION "THE TIGER."

SAN FRANCISCO, OAKLAND AND SAN JOSE RAILWAY.



Leave San Francisco for Oakland, Berkeley and Piedmont Avenue.

*6:00	*6:40	7:00	*7:20	*7:40	8:00	*8:20	*8:40	9:00	9:20	9:40	10:00	10:20	10:40	11:00	11:20	11:40	A. M.
12:00	12:20	12:40	1:00	1:20	1:40	2:00	2:20	2:40	3:00	3:20	3:40	4:00	4:20	4:40	5:00	5:20	5:40
6:00	6:20	6:40	7:00	7:45	8:30	9:30	10:30	11:30	P. M.	12:30	A. M.						

Leave Berkeley for San Francisco.

*5:50	*6:20	*6:40	7:00	*7:20	*7:40	8:00	*8:20	*8:40	9:00	9:20	9:40	10:00	10:20	10:40	11:00	11:20	
11:40	A. M.	12:00	12:20	12:40	1:00	1:20	1:40	2:00	2:20	2:40	3:00	3:20	3:40	4:00	4:20	4:40	
5:00	5:20	5:40	6:00	6:20	†6:40	‡6:55	†7:00	7:40	8:25	9:25	10:25	11:25	P. M.				

Leave Piedmont Avenue for San Francisco.

*5:52	*6:22	*6:42	7:02	*7:22	*7:42	8:02	*8:22	*8:42	9:02	9:22	9:42	10:02	10:22	10:42	11:02	11:22	
11:42	A. M.	12:02	12:22	12:42	1:02	1:22	1:42	2:02	2:22	2:42	3:02	3:22	3:42	4:02	4:22	4:42	
5:02	5:22	5:42	6:02	6:22	†6:42	‡6:56	†7:02	7:42	8:27	9:27	10:27	11:27	P. M.				

Leave San Pablo Avenue for San Francisco

*5:58	*6:28	*6:48	7:08	*7:28	*7:48	8:08	*8:28	*8:48	9:08	9:28	9:48	10:08	10:28	10:48	11:08	11:28	
11:48	A. M.	12:08	12:28	12:48	1:08	1:28	1:48	2:08	2:28	2:48	3:08	3:28	3:48	4:08	4:28	4:48	
5:08	5:28	5:48	6:08	6:28	†6:48	‡7:03	†7:07	7:48	8:33	9:33	10:33	11:33	P. M.				

*Daily except Sunday.

‡Daily except Saturday and Sunday.

Trains to and from Berkeley do not stop at San Pablo Ave. Station.

Trains leaving Berkeley Station at 7 and 9 A. M. and at 4 and 7:40 P. M., stop at San Pablo Avenue Station connecting with east bound Santa Fe trains.

Oakland Transit Consolidated Cars leave Fourteenth and Broadway, Oakland, at same time as Ferry trains leave Berkeley connecting with train at San Pablo Avenue Station for San Francisco.

YOUNG MEN

Here is your opportunity to wear Fine Perfect
Fitting TAILOR MADE CLOTHES in your

College Days

We cut our garments on most modern lines—
giving you the real

c.1 The Tiger
September, 1904

Up-To-Ti

Suits

c.1 The Tiger
September, 1904

We
as
th

Prices

Library

Lick-Wilmerding High School

755 Ocean Avenue

San Francisco, CA 94112

We have

the price

Suits

lit.

KNOX & RENNACKER

415 MARKET STREET

BET. FIRST AND FREMONT

SAN FRANCISCO, CALIFORNIA

